



# Economic and Social Council

Distr.: General  
10 August 2015

Original: English

## Economic Commission for Europe

### Inland Transport Committee

### World Forum for Harmonization of Vehicle Regulations

### Working Party on Pollution and Energy

#### Seventy-first session

Geneva, 9-12 June 2015

## Report of the Working Party on Pollution and Energy (GRPE) on its seventy-first session

### Contents

	<i>Paragraphs</i>	<i>Page</i>
I. Attendance and opening statements .....	1-2	3
II. Adoption of the agenda (agenda item 1) .....	3-5	3
III. Report on the last session of the World Forum for Harmonization of Vehicle Regulations (WP.29) (agenda item 2) .....	6	4
IV. Light vehicles (agenda item 3) .....	7-24	4
A. Regulations Nos. 68 (Measurement of the maximum speed, including electric vehicles), 83 (Emissions of M <sub>1</sub> and N <sub>1</sub> vehicles), 101 (CO <sub>2</sub> emissions/fuel consumption) and 103 (Replacement pollution control devices) .....	7-13	4
B. GTR No. 15 on Worldwide harmonized Light vehicles Test Procedure (WLTP) .....	14-24	5
V. Heavy duty vehicles (agenda item 4) .....	25-30	6
A. Regulations Nos. 49 (Emissions of compression ignition and positive ignition (LPG and CNG) engines) and 132 (Retrofit Emissions Control devices (REC)) .....	25-29	6
B. GTRs Nos. 4 (World-wide harmonized Heavy Duty Certification procedure (WHDC)), 5 (World-Wide harmonized Heavy duty On-Board Diagnostic systems (WWH-OBD)) and 10 (Off-Cycle Emissions (OCE)) ...	30	7
VI. Regulations Nos. 85 (Measurement of the net power), 115 (LPG and CNG retrofit systems) and 133 (Recyclability of motor vehicles) (agenda item 5) .....	31-37	7
VII. Agricultural and forestry tractors, non-road mobile machinery (agenda item 6) ....	38-39	7



A.	Regulations Nos. 96 (Diesel emission (agricultural tractors)) and 120 (Net power of tractors and non-road mobile machinery) .....	38	7
B.	GTR No. 11 (Non-road mobile machinery engines).....	39	8
VIII.	Particle Measurement Programme (PMP) (agenda item 7) .....	40-41	8
IX.	Gaseous Fuelled Vehicles (GFV) (agenda item 8) .....	42-43	8
X.	Motorcycles and mopeds (agenda item 9) .....	44-50	8
A.	Environmental and Propulsion Performance Requirements (EPPR) for L-category vehicles.....	44-48	8
B.	Regulations Nos. 40 (Emission of gaseous pollutants by motor cycles) and 47 (Emission of gaseous pollutants of mopeds).....	49	9
C.	GTR No. 2 (World-wide Motorcycle emissions Test Cycle (WMTC)).....	50	9
XI.	Electric Vehicles and the Environment (EVE) (agenda item 10) .....	51-52	9
XII.	Vehicle Propulsion System Definitions (VPSD) (agenda item 11) .....	53-59	10
XIII.	Fuel Quality (FQ) (agenda item 12) .....	60-62	10
XIV.	International Whole Vehicle Type Approval (IWVTA) (agenda item 13).....	63	11
XV.	Vehicles Interior Air Quality (VIAQ) (agenda item 14) .....	64-66	11
XVI.	1997 Agreement (periodical technical inspections): Rule No. 1 (Environment protection) (agenda item 15).....	67	11
XVII.	Exchange of information on emission requirements (agenda item 16) .....	68	11
XVIII.	Election of officers (agenda item 17) .....	69	12
XIX.	Any other business (agenda item 18) .....	70-71	12
A.	French interpretation .....	70	12
B.	Tributes .....	71	12
XX.	Provisional agenda for the next session.....	72-75	12
A.	Next GRPE session.....	72	12
B.	Provisional agenda for the next proper GRPE session.....	73	12
C.	Informal meetings in conjunction with the next GRPE session.....	74-75	14
 Annexes			
I	List of informal documents distributed without an official symbol .....	15	
II	Informal meetings held in conjunction with the GRPE session .....	17	
III	List of GRPE informal working groups, task forces and subgroups .....	18	
IV	Amendments to Regulation No. 101 .....	19	
V	Amendments to ECE/TRANS/WP.29/GRPE/2015/13 .....	20	
VI	Amendments to ECE/TRANS/WP.29/GRPE/2015/9 .....	25	

## I. Attendance and opening statements

1. The Working Party on Pollution and Energy (GRPE) held its seventy-first session from 9 to 12 June 2015, with Mr. C. Albus (Germany) as Chair and Mrs. R. Urdhwareshe (India) as Vice-Chair. Experts from the following countries participated in the work following Rule 1(a) of the Rules of Procedure of the World Forum for Harmonization of Vehicle Regulations (WP.29) (TRANS/WP.29/690, as amended): Belgium; Canada; China; France; Germany; Hungary; India; Italy; Japan; Netherlands; Norway; Poland; Republic of Korea (Korea); Romania; Russian Federation; South Africa; Spain; Sweden; Switzerland; United Kingdom of Great Britain and Northern Ireland (UK) as well as the United States of America. Experts from the European Commission (EC) also participated. Experts from the following non-governmental organizations took part in the session: Association for Emissions Control by Catalyst (AECC); European Association of Automobile Suppliers (CLEPA/MEMA/JAPIA); European Federation for Transport and Environment (T&E); European Garage Equipment Association (EGEA); European Liquefied Petroleum Gas Association (AEGPL); International Association for Natural Gas Vehicles (IANGV/NGV Global); International Motorcycle Manufacturers Association (IMMA); International Organization of Motor Vehicle Manufacturers (OICA); International Petroleum Industry Environment Conservation Association (IPIECA); Technical Committee of Petroleum Additive Manufacturers in Europe (CEFIC-ATC) and The Oil Companies European Organization for Environment, Health and Safety (CONCAWE).
2. The Chair introduced Mr. M. Gangonells as the new Secretary of GRPE after the conclusion of the staff selection process.

## II. Adoption of the agenda (agenda item 1)

*Documentation:* ECE/TRANS/WP.29/GRPE/2015/10 and Add.1  
Informal documents GRPE-71-01, GRPE-71-10 and  
GRPE-71-17-Rev.1

3. GRPE adopted the provisional agenda prepared for its seventy-first session (ECE/TRANS/WP.29/GRPE/2015/10 and Add.1), as updated and consolidated in GRPE-71-17-Rev.1, including the informal documents tabled for the session. GRPE noted GRPE-71-01, on the organization of GRPE Informal Working Group (IWG) meetings held during the week.
4. The informal documents distributed during the GRPE session are listed in Annex I. Annex II contains a list of the informal meetings held in conjunction with the GRPE session. Annex III lists GRPE IWGs, task forces and subgroups, giving details on their Chairs, secretaries and the end of their mandates.
5. The secretariat introduced GRPE-71-10, announcing that the next GRPE session would take place on 12-15 January 2016 and recalling the corresponding deadline (19 October 2015) for the submission of official documents. These dates may be reconfirmed by WP.29 at its June 2015 session. The Chairs and Secretaries of IWGs were invited to approach the secretariat to define the calendar of meetings of IWGs for the January 2016 GRPE session.

### **III. Report on the last session of the World Forum for Harmonization of Vehicle Regulations (WP.29) (agenda item 2)**

*Documentation:* ECE/TRANS/WP.29/1114 and Corr.1  
Informal document GRPE-71-11

6. The secretariat introduced GRPE-71-11 and reported on GRPE items discussed during the 165<sup>th</sup> session of the World Forum. For more details, see ECE/TRANS/WP.29/1114 and Corr.1. The Chair of GRPE underlined that some of the WP.29 topics are becoming more and more important to the group and he encouraged the experts to discuss these topics with their colleagues who attend WP.29 sessions so that better linkages are established.

### **IV. Light vehicles (agenda item 3)**

#### **A. Regulations Nos. 68 (Measurement of the maximum speed, including electric vehicles), 83 (Emissions of M<sub>1</sub> and N<sub>1</sub> vehicles), 101 (CO<sub>2</sub> emissions/fuel consumption) and 103 (Replacement pollution control devices)**

*Documentation:* ECE/TRANS/WP.29/GRPE/2015/14  
ECE/TRANS/WP.29/GRPE/2015/15  
Informal documents GRPE-71-08, GRPE-71-09 and GRPE-71-18

7. The expert from EC introduced ECE/TRANS/WP.29/GRPE/2015/15 aimed at correcting the unit of measure of a road load coefficient used in the 05 and 06 series of amendments to UN Regulation No. 83.

8. GRPE adopted ECE/TRANS/WP.29/GRPE/2015/15 and requested the secretariat to submit it to WP.29 and the Administrative Committee of the 1958 Agreement (AC.1) for consideration and vote at their November 2015 sessions as draft Supplement 11 to 05 series of amendments and draft Supplement 6 to 06 series of amendments to UN Regulation No. 83.

9. The expert from EC introduced ECE/TRANS/WP.29/GRPE/2015/14 proposing to align the criteria for the selection of tyres in UN Regulation No. 101 with those listed in UN Regulation No. 83. The expert from OICA presented GRPE-71-18 amending ECE/TRANS/WP.29/GRPE/2015/14 to adapt the requirements related to the reference to UN Regulation No. 83.

10. GRPE adopted ECE/TRANS/WP.29/GRPE/2015/14 amended by GRPE-71-18 as reproduced in Annex IV of this report. GRPE requested the secretariat to submit it to WP.29 and AC.1 for consideration and vote at their November 2015 sessions as draft Supplement 6 to 01 series of amendments to UN Regulation No. 101.

11. The expert from Germany presented a report (GRPE-71-08) by the Federal Highway Research Institute (BASt) of the study undertaken by Germany on the performance and the durability of replacement catalytic converters. On the basis of the findings of the study he explained that the performance of these converters was very variable and, therefore, UN Regulation No. 103 may need to be amended to limit these performance variations. He recommended keeping this issue under close surveillance and offered to prepare a proposal as early as possible (GRPE-71-09).

12. The expert from AECC stressed the importance of durability requirements for all replacement components and expressed his readiness to cooperate in this project.
13. The Chair of GRPE recalled the importance of this issue and the need for action. He invited all stakeholders to share their data and contribute to the process.

## **B. GTR No. 15 on Worldwide harmonized Light vehicles Test Procedure (WLTP)**

*Documentation:* Informal documents GRPE-71-02, GRPE-71-15, GRPE-71-19-Rev.1, GRPE-71-24, GRPE-71-25, GRPE-71-26 and GRPE-71-27

14. The Chair of the IWG on WLTP reported on the progress made by the group in Phase 1B of the development of UN GTR No. 15 (GRPE-71-24). He highlighted some key issues which were still under discussion such as the number of tests to confirm the declared value for CO<sub>2</sub> which may require a political decision at the next GRPE session. He also highlighted the problems related to cross references to private standards in regulations.
15. The drafting manager of the IWG on WLTP introduced GRPE-71-25 and GRPE-71-26 containing all confirmed items for the time being on the amendments to UN GTR No. 15 as a result of the activities under Phase 1B.
16. The Chair of GRPE recalled the importance of harmonization and encouraged all Contracting Parties involved to find a compromise solution on remaining open issues such as the number of tests. The secretariat informed GRPE that a representative of the Society of Automotive Engineers (SAE) may attend the June 2015 session of WP.29 to discuss their position on cross references to private standards in regulations. GRPE noted the intention of the IWG on WLTP to submit an official document proposing amendments to UN GTR No. 15, corresponding to the mandate of Phase 1B, at the next GRPE session after the meeting of the IWG in Tokyo in September 2015.
17. The expert from Japan, one of the sponsors for the development of UN GTR No. 15, presented a draft proposal on the mandate for Phase 2 (GRPE-71-27), including provisions for durability, evaporative emissions and On-Board Diagnostic systems (OBD). The Chair of GRPE explained that some of the issues could be covered by another UN GTR.
18. GRPE endorsed the draft mandate for Phase 2 and suggested that the technical sponsors for the development of UN GTR No. 15 submit a request for authorization to WP.29 and the Executive Committee of the 1998 Agreement (AC.3) at their November 2015 sessions to start Phase 2 activities immediately after the conclusion of Phase 1B.
19. On behalf of the Ministry of the Environment of Japan, the expert from Japan presented GRPE-71-15 on the transposition of the UN GTR on WLTP into national legislation as a test procedure and on setting permissible exhaust emission limit levels for the next term.
20. The expert from EC explained the transposition process of the UN GTR on WLTP into the legislation of the European Union with the intention to replace in 2017 the New European Driving Cycle (NEDC) with a new European Regulation (GRPE-71-19-Rev.1). He continued his presentation on possible solutions to transpose the UN GTR on WLTP into a new UN Regulation to be annexed to the 1958 Agreement taking into account that limit values are not harmonized yet and that the options in UN GTR No. 15 shall also be transposed. He pointed out a multi-level option as a first step towards full harmonization and as best solution to enable Europe and Japan to issue approvals according to the 1958 Agreement. He explained that level 2 would contain the most stringent limits from across all regions and would be subject to full mutual recognition,

whereas levels 1a (with current UN Regulation No. 83 limits) and 1b (with other limits such as the Japanese ones) would be subject to optional acceptance by other Contracting Parties.

21. The expert from Japan stated the position of his country on the transposition of the UN GTR on WLTP into a new UN Regulation to be annexed to the 1958 Agreement (GRPE-71-02). He highlighted that it should be developed as a truly internationally harmonized regulation that reflects appropriately the results of the UN GTR discussions. He expressed the intention of his country to investigate possible solutions.

22. The expert from OICA drew the attention to the difficulties to develop a harmonized UN Regulation taking into account the current level of harmonization in UN GTR No. 15. He insisted in the need to follow the road map.

23. The Chair of GRPE invited the group to review the multi-level solution introduced in GRPE-71-19-Rev.1 and to resume consideration at the next GRPE session in January 2016.

24. GRPE acknowledged the progress made by the IWG on WLTP and noted the request of the group for a meeting room for one and a half days during the GRPE week in January 2016.

## **V. Heavy duty vehicles (agenda item 4)**

### **A. Regulations Nos. 49 (Emissions of compression ignition and positive ignition (LPG and CNG) engines) and 132 (Retrofit Emissions Control devices (REC))**

*Documentation:* Informal documents GRPE-71-05, GRPE-71-06 and GRPE-71-07

25. The expert from OICA presented GRPE-71-05 and GRPE-71-06 proposing amendments to UN Regulation No. 49 on the verification of the measurement equipment linearity in line with UN Regulation No. 96 and on the monitoring of the fuel injection malfunction (On-Board Diagnostic systems) respectively.

26. The expert from EC expressed study reservations. GRPE agreed in principle with both proposals and requested the secretariat to distribute them with an official symbol at the next GRPE session.

27. The secretariat introduced GRPE-71-07 on issues identified when producing Revision 7 of UN Regulation No. 49. The secretariat underlined that typo errors were already corrected and that the purpose of the document was to bring the attention of GRPE to the substantive issues on which the group might wish to take action.

28. The Chair of the IWG on Gaseous Fuelled Vehicles (GFV) stressed the need to discuss some of the issues identified by the secretariat in the IWG. The expert from EC volunteered to take the responsibility on the amendments to UN Regulation No. 49 on the basis of GRPE-71-07 and to coordinate with the corresponding IWGs when necessary.

29. The Chair of GRPE thanked the secretariat for their contribution and stressed the importance of correctness of the provisions. He explained that revised versions uploaded on the website should be in line with the legally binding texts which had been voted on by WP.29 and AC.1. GRPE agreed to resume the discussion at the next GRPE session on the basis of an informal document to be submitted by the expert from EC.

**B. GTR Nos. 4 (World-wide harmonized Heavy Duty Certification procedure (WHDC)), 5 (World-Wide harmonized Heavy duty On-Board Diagnostic systems (WWH-OBD)) and 10 (Off-Cycle Emissions (OCE))**

30. GRPE did not receive any new proposal to amend UN GTR Nos. 4, 5 and 10.

**VI. Regulations Nos. 85 (Measurement of the net power), 115 (LPG and CNG retrofit systems) and 133 (Recyclability of motor vehicles) (agenda item 5)**

*Documentation:* ECE/TRANS/WP.29/GRPE/2015/11  
ECE/TRANS/WP.29/GRPE/2015/12  
Informal document GRPE-71-03

31. The expert from the Russian Federation introduced ECE/TRANS/WP.29/GRPE/2015/11 proposing to clarify the determination of the net power when the disconnectable fan was disconnected or the progressive one was running at maximum slip during the test in UN Regulation No. 85.

32. The experts from Germany and Japan suggested to specify, in the proposal, a concrete calculation procedure to bring more clarity on how to determine the net power in these cases.

33. GRPE invited the experts from Germany and Japan to provide inputs to the Russian Federation and agreed to resume the discussion on this subject at the next GRPE session on the basis of an updated official document.

34. The expert from OICA presented ECE/TRANS/WP.29/GRPE/2015/12 proposing amendments to UN Regulation No. 85 to avoid a duplicated correction of the measured engine power in case of self-correcting turbo chargers.

35. GRPE adopted ECE/TRANS/WP.29/GRPE/2015/12 and requested the secretariat to submit it to WP.29 and AC.1 for consideration and vote at their November 2015 sessions as draft Supplement 7 to the original version of UN Regulation No. 85.

36. The Chair of the IWG on GFV introduced GRPE-71-03 aimed at simplifying the communication model of approval in UN Regulation No. 115 to prevent the retrofit system manufacturer from knowing in advance the original CO<sub>2</sub> emissions of all qualified vehicles.

37. GRPE agreed in principle with the proposal and requested the secretariat to distribute it with an official symbol at the next GRPE session.

**VII. Agricultural and forestry tractors, non-road mobile machinery (agenda item 6)**

**A. Regulations Nos. 96 (Diesel emission (agricultural tractors)) and 120 (Net power of tractors and non-road mobile machinery)**

38. There were no proposals to amend UN Regulations Nos. 96 and 120.

## **B. GTR No. 11 (Non-road mobile machinery engines)**

39. There were no proposals to amend UN GTR No. 11.

## **VIII. Particle Measurement Programme (PMP) (agenda item 7)**

*Documentation:* Informal document GRPE-71-23

40. The Chair of the IWG on PMP presented a status report (GRPE-71-23) on the activities of the group. He explained the ongoing work on non-exhaust particle emissions as a result of brake wear and the interaction between tyre and road. He informed GRPE that the IWG would submit, once the study would be concluded, a final report on the main findings and conclusions to be used as basis for discussion at GRPE. He also reported on the ongoing considerations of the group on the measurement of Particle Number (PN) during the regeneration and the measurement of exhaust particle emissions with a size below twenty-three nanometre.

41. GRPE acknowledged the progress made by the group and noted the request for a meeting room for half a day during the GRPE week in January 2016.

## **IX. Gaseous Fuelled Vehicles (GFV) (agenda item 8)**

*Documentation:* Informal document GRPE-71-28-Rev.1

42. The Chair of the IWG on GFV presented a status report (GRPE-71-28-Rev.1) on the activities of the group and, in particular, those related to the development of a new UN Regulation on the requirements for the type approval of retrofit systems intended to be installed on a heavy duty diesel vehicle to enable its operation either in diesel mode or in dual-fuel mode. He informed GRPE that the group intended to submit a first draft of the new UN Regulation at the next GRPE session in January 2016.

43. GRPE acknowledged the work progress made by the group and noted the request for a meeting room for half a day during the GRPE week in January 2016.

## **X. Motorcycles and mopeds (agenda item 9)**

### **A. Environmental and Propulsion Performance Requirements (EPPR) for L-category vehicles**

*Documentation:* Informal documents GRPE-71-14, GRPE-71-20, GRPE-71-21 and GRPE-71-22

44. The Chair of the IWG on EPPR presented a status report (GRPE-71-22) on the activities of the group and, in particular, on the work progress made in the three priority subjects identified and selected for the first stage of work: a draft UN GTR on evaporative and crankcase emissions, a draft UN GTR on on-board diagnostics and an entire revision of UN GTR No. 2. He introduced a first draft of the new UN GTR on evaporative and crankcase emissions (GRPE-71-20) and highlighted some open issues under consideration such as reference fuels, reference to vehicle classes, list of acronyms and symbols, and ageing test procedure. He expressed the intention of the group to submit a proposal with an official symbol at the next GRPE session. He informed GRPE that the group also intended to submit a first draft of the new UN GTR on on-board diagnostics at the next GRPE session. He underlined the need to amend the existing mandate due to the limited time to



complete all work. He requested an extension of the timeline until 2020 to be able to finish all topics within the current mandate going beyond the three priority subjects identified for the first stage of work (GRPE-71-21).

45. The expert from the United States of America noted the three different reference fuels and the maximum amount of ethanol to be set. The expert from IMMA recalled the priority agreed upon powered two wheelers, in particular two wheelers with petrol engines, to facilitate the coordination of work. He informed GRPE about some progress made on powered three wheelers. The Chair of GRPE stated that the issue of referencing vehicle classes defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3) and the Special Resolution No.1 (S.R.1), as well as the use of the terms "light vehicle" and "light duty vehicle", needed to be further discussed at the next GRPE session in January 2016.

46. The expert from EC reminded GRPE of the survey conducted by the European Union as part of the Euro 5 impact study and encouraged all experts to take part in the survey (GRPE-71-14).

47. GRPE endorsed the draft amendment to the existing mandate of the IWG on EPPR to extend the timeline until 2020 for continuation and completion of the work. GRPE suggested the European Commission, as technical sponsor for these activities, to submit the corresponding request to WP.29 and AC.3 at their June 2015 sessions.

48. GRPE acknowledged the progress made by the IWG on EPPR and noted the request for a meeting room for one day during the GRPE week in January 2016.

## **B. Regulations Nos. 40 (Emission of gaseous pollutants by motor cycles) and 47 (Emission of gaseous pollutants of mopeds)**

49. GRPE did not receive any new proposal to amend UN Regulations Nos. 40 and 47.

## **C. GTR No. 2 (World-wide Motorcycle emissions Test Cycle (WMTC))**

50. GRPE did not receive any new proposal to amend UN GTR No. 2.

# **XI. Electric Vehicles and the Environment (EVE) (agenda item 10)**

*Documentation:* Informal documents GRPE-71-29

51. The Chair of the IWG on EVE presented a status report (GRPE-71-29) on the ongoing activities on data and information gathering. He informed GRPE about the work progress made by the IWG in the following areas corresponding to Part A of the mandate: (i) method of stating energy consumption led by China, (ii) battery performance and durability provisions led by Canada and the United States of America, and (iii) determination of the power of electric vehicles led by Germany and the Republic of Korea. He expressed the intention of the group to present at the next GRPE session some conclusions on how to move forward after Part A. He drew the attention of GRPE to the possible overlap of work dealing with testing battery durability in the IWGs on EVE and WLTP.

52. GRPE underlined the need to ensure a proper coordination between EVE and WLTP IWGs to avoid duplication of work. GRPE acknowledged the progress made by the IWG on

EVE and noted the request for a meeting room for half a day during the GRPE week in January 2016.

## **XII. Vehicle Propulsion System Definitions (VPSD) (agenda item 11)**

Documentation: ECE/TRANS/WP.29/GRPE/2015/13  
Informal documents GRPE-71-12, GRPE-71-13-Rev.1 and  
GRPE-71-31

53. The Secretary of the IWG on VPSD introduced ECE/TRANS/WP.29/GRPE/2015/13 on a new draft Mutual Resolution (draft M.R.2) containing vehicle powertrain definitions. She presented GRPE-71-12 proposing amendments to ECE/TRANS/WP.29/GRPE/2015/13 following the latest discussions and conclusions of the group. She referred to GRPE-71-13-Rev.1 as a consolidated version to facilitate the understanding of the proposal.

54. The Chair of the IWG on GFV presented GRPE-71-31 proposing to add new paragraphs to ECE/TRANS/WP.29/GRPE/2015/13 to define different internal combustion engine vehicles depending on the fuel storage system/s and the fuel/s used by the engine to operate. He highlighted that these definitions might not necessarily be aligned with those in the regulations and, therefore, the current definitions in the existing regulations should not immediately be aligned with those proposed in draft M.R.2 but should be progressively adjusted.

55. The Chair of the IWG on WLTP mentioned that his group might not be able to take into account all definitions proposed by the IWG on VPSD due to time critical circumstances.

56. The Chair of the IWG on VPSD clarified that the proposed definitions should be used as a basis for harmonization and that they probably matched with those in the UN GTR on WLTP.

57. The expert from OICA underlined the importance of the exercise to harmonize vehicle propulsion system definitions. He announced that further work would certainly be needed to clarify several issues such as how to define an internal combustion engine when it is not used for propulsion.

58. GRPE adopted ECE/TRANS/WP.29/GRPE/2015/13 as amended by Annex V of this report. GRPE requested the secretariat to submit it to WP.29 and AC.3 for consideration at their November 2015 sessions as draft Mutual Resolution No. 2.

59. GRPE acknowledged the work performed by the IWG on VPSD and noted the conclusion of its activities. GRPE agreed that further amendments to the proposed M.R.2 would be proposed by the relevant IWGs.

## **XIII. Fuel Quality (FQ) (agenda item 12)**

Documentation: ECE/TRANS/WP.29/GRPE/2015/9  
Informal documents GRPE-71-04-Rev.1 and GRPE-71-16

60. The expert from OICA introduced ECE/TRANS/WP.29/GRPE/2015/9 proposing amendments to the recommendations on market fuel quality in R.E.3. She presented GRPE-71-04-Rev.1 clarifying that these recommendations would not impose any obligation to the Contracting Parties to the 1958 Agreement.

61. On behalf of IPIECA and CONCAWE, the expert from CONCAWE presented GRPE-71-16 with some remarks on the proposed amendments to the recommendations on market fuel quality. She expressed the opinion that these draft amendments were unnecessary since current recommendations were already sufficient to provide information on those fuel properties that had been implicated in irreversible changes in some types of vehicle emission control technologies. She underlined that R.E.3 was not suitable for this purpose. She referred to other forums devoted to fuels issues, such as the United Nations Partnership for Clean Fuels and Vehicle, as a more appropriate forum. She volunteered to discuss bilaterally with the industry some specific issues of the draft amendments.

62. The Contracting Parties to the 1958 Agreement endorsed ECE/TRANS/WP.29/GRPE/2015/9 as amended by Annex VI of this report and requested the secretariat to submit it to WP.29 for further consideration at its November 2015 session.

#### **XIV. International Whole Vehicle Type Approval (IWVTA) (agenda item 13)**

63. GRPE noted the progress made by the IWG on IWVTA and its subgroups on draft Revision 3 to the 1958 Agreement and on draft UN Regulation No. 0. GRPE agreed to resume consideration of this subject at its next session.

#### **XV. Vehicles Interior Air Quality (VIAQ) (agenda item 14)**

*Documentation:* Informal document GRPE-71-30

64. The Chair of the IWG on VIAQ reported on the first meeting of the group held prior to GRPE (GRPE-71-30). He provided some information on the organization and road map of the group as well as on the work to be done.

65. The expert from the Russian Federation stated that the work should not only focus on the interior air emissions generated from interior materials but also on the air pollutants entering the vehicle together with the intake air from outside.

66. GRPE considered the inclusion in the scope of interior air pollutants from the outside air as a possible extension of the mandate at a later stage. GRPE acknowledged the progress made by the IWG on VIAQ and noted the request for a meeting room for half a day during the GRPE week in January 2016.

#### **XVI. 1997 Agreement (Periodical technical inspections): Rule No. 1 (Environment protection) (agenda item 15)**

67. GRPE did not receive any new proposal for amendments to Rule No. 1.

#### **XVII. Exchange of information on emission requirements (agenda item 16)**

68. The expert from the United States of America gave an oral report about new regulatory developments on emissions and greenhouse gases for heavy duty vehicles and their trailers taking place in his country. He proposed further detail for the next GRPE session.

## **XVIII. Election of officers (agenda item 17)**

69. In compliance with Rule 37 of the Rules of Procedures (TRANS/WP.29/690, Amends 1 and 2.) GRPE unanimously elected Mr. C. Albus (Germany) as Chair and Ms. R. Urdhwareshe (India) as Vice-Chair to GRPE for the sessions of GRPE in the year 2016.

## **XIX. Any other business (agenda item 18)**

### **A. French interpretation**

70. The experts from Belgium, France and Switzerland raised concerns about the fact that French interpretation was not available on Thursday 11 and Friday 12 June 2015.

### **B. Tributes**

71. On behalf of GRPE, the Chair of GRPE paid tribute to Mr. I. Pollak (Hungary) and Mr. S. Davies (UK), who would no longer be attending GRPE sessions, and acknowledged their considerable contributions to the activities of GRPE.

## **XX. Provisional agenda for the next session**

### **A. Next GRPE session**

72. The next GRPE session, including its IWGs sessions, is scheduled to be held in Geneva, Palais des Nations, starting on Monday, 11 January 2016, from 9.30 a.m. until Friday, 15 January 2016, at 5.30 p.m., subject to the confirmation by the secretariat (see GRPE-72-01, forthcoming). Interpretation would be provided from 12 January (2.30 p.m.) to 15 January (12.30 p.m.) 2016.

### **B. Provisional agenda for the next proper GRPE session**

73. GRPE agreed on the following provisional agenda for its next session:

1. Adoption of the agenda.
2. Report on the last sessions of the World Forum for Harmonization of Vehicle Regulations (WP.29).
3. Light vehicles:
  - (a) Regulations Nos. 68 (Measurement of the maximum speed, including electric vehicles), 83 (Emissions of M<sub>1</sub> and N<sub>1</sub> vehicles), 101 (CO<sub>2</sub> emissions/fuel consumption) and 103 (Replacement pollution control devices);
  - (b) Global Technical Regulation No. 15 on Worldwide harmonized Light vehicles Test Procedures (WLTP).
4. Heavy duty vehicles:
  - (a) Regulations Nos. 49 (Emissions of compression ignition and positive ignition (LPG and CNG) engines) and 132 (Retrofit Emissions Control devices (REC));

- 
- (b) Global technical regulations Nos. 4 (World-wide harmonized Heavy duty Certification procedure (WHDC)), 5 (World-Wide harmonized Heavy duty On-Board Diagnostic systems (WWH-OBD)) and 10 (Off-Cycle Emissions (OCE)).
  5. Regulations Nos. 85 (Measurement of the net power), 115 (LPG and CNG retrofit systems) and 133 (Recyclability of motor vehicles).
  6. Agricultural and forestry tractors, non-road mobile machinery:
    - (a) Regulations Nos. 96 (Diesel emission (agricultural tractors)) and 120 (Net power of tractors and non-road mobile machinery);
    - (b) Global technical regulation No. 11 (Non-road mobile machinery engines).
  7. Particle Measurement Programme (PMP).
  8. Gaseous Fuelled Vehicles (GFV).
  9. Motorcycles and mopeds:
    - (a) Environmental and Propulsion Performance Requirements (EPPR) for L-category vehicles;
    - (b) Regulations Nos. 40 (Emission of gaseous pollutants by motor cycles) and 47 (Emission of gaseous pollutants of mopeds);
    - (c) Global technical regulation No. 2 (World-wide Motorcycle emissions Test Cycle (WMTC)).
  10. Electric Vehicles and the Environment (EVE).
  11. Draft Mutual Resolution No. 2 (draft M.R.2).
  12. Fuel Quality (FQ).
  13. International Whole Vehicle Type Approval (IWVTA).
  14. Vehicles Interior Air Quality (VIAQ).
  15. 1997 Agreement (Periodical technical inspections): Rule No. 1 (Environment protection).
  16. Exchange of information on emission requirements.
  17. Any other business.

### C. Informal meetings in conjunction with the next GRPE session

74. The informal meetings, subject to confirmation:

<i>Date</i>	<i>Group</i>	<i>Acronym</i>	<i>Time</i>
Monday 11 January 2016	Electric Vehicles and the Environment	EVE	9.30 a.m. – 12.30 p.m.
	Worldwide harmonized Light vehicles Test Procedure	WLTP	2.30 p.m. – 5.30 p.m.
Tuesday 12 January 2016	Environmental and Propulsion Performance Requirements of L-category vehicles	EPPR	9.30 a.m. – 12.30 p.m. 2.30 p.m. – 5.30 p.m.
	Worldwide harmonized Light vehicles Test Procedure	WLTP	9.30 a.m. – 12.30 p.m. 2.30 p.m. – 5.30 p.m.
Wednesday 13 January 2016	Gaseous Fuelled Vehicles	GFV	9.30 a.m. – 12.30 p.m.
	Particulate Measurement Programme	PMP	9.30 a.m. – 12.30 p.m.
	Vehicle Interior Air Quality	VIAQ	9.30 a.m. – 12.30 p.m.

75. The agendas of these meetings will be prepared by the respective secretaries and distributed to the members of each group prior to each meeting.

## Annex I

### List of informal documents distributed without an official symbol

<i>GRPE-71-</i>	<i>Transmitted by</i>	<i>Title</i>	<i>Follow-up</i>
1	Secretariat	Informal meetings in conjunction with the GRPE (proper) session: schedule and rooms	A
2	Japan	Position of Japan on drafting a new UN Regulation for WLTP	A
3	GFV	Proposal for amendments to UN Regulation No. 85	C
4-Rev.1	AECC, CLEPA, EUROMOT and OICA	Proposal for amendments to ECE/TRANS/WP.29/GRPE/2015/9	E
5	OICA	Proposal for amendments on linearity verification to UN Regulation No. 49	C
6	OICA	Proposal for amendments on fuel injection malfunction monitoring to UN Regulation No. 49	C
7	Secretariat	Identified issues in Revision 7 of UN Regulation No. 49	D
8	Germany	Final BAST report (Replacement catalytic converters)	A
9	Germany	UN Regulation No. 103	A
10	Secretariat	General information	A
11	Secretariat	Highlights of the last sessions of WP.29 (March 2015)	A
12	VPSD	Proposal for amendments to ECE/TRANS/WP.29/GRPE/2015/13	B
13-Rev.1	VPSD	Proposal for amendments to ECE/TRANS/WP.29/GRPE/2015/13 (Consolidated version)	A
14	EC	EC Stakeholder Consultation on Euro 5 Environmental Step for L-Category Vehicles	A
15	Japan	International Harmonization of Exhaust Emissions Test Procedures for Passenger Vehicles (M1) and Light Trucks (N1)	A
16	IPIECA and CONCAWE	Position from IPIECA and CONCAWE on ECE/TRANS/WP.29/GRPE/2015/9 and Informal document GRPE-71-04-Rev.1	A
17-Rev.1	Secretariat	Updated provisional agenda (including all informal documents)	A
18	OICA	Proposal for amendments to ECE/TRANS/WP.29/GRPE/2015/14 on UN Regulation No. 101	B
19-Rev.1	EC	Transposition of WLTP into EU Regulations and UN Regulations	A
20	EPPR	Draft UN GTR on evaporative and crankcase emissions	A
21	EPPR	Draft mandate with request for extension of timeline	A
22	EPPR	Progress report	A

<i>GRPE-71-</i>	<i>Transmitted by</i>	<i>Title</i>	<i>Follow-up</i>
23	PMP	Progress report	A
24	WLTP	Progress report	A
25	WLTP	UN GTR version 26.05.2015 (clean)	A
26	WLTP	UN GTR version 26.05.2015	A
27	WLTP	Mandate for WLTP Phase 2	A
28-Rev.1	GFV	Status report	A
29	EVE	Progress report	A
30	VIAQ	Status report	A
31	GFV	Proposal for amendments to ECE/TRANS/WP.29/GRPE/2015/13	B

*Notes:*

- A Consideration by GRPE completed or to be superseded.
- B Adopted and submitted to WP.29.
- C Resume consideration on the basis of an official document.
- D Kept as reference document/continue consideration.
- E Endorsed by the Contracting Parties to the 1958 Agreement and submitted to WP.29 for further consideration.



## Annex II

### Informal meetings held in conjunction with the GRPE session

<i>Date</i>	<i>Time</i>	<i>Group</i>	<i>Acronym</i>
8 June 2015	9:30 a.m. - 12:30 p.m.	Electric Vehicles and the Environment	EVE
	2:30 p.m. - 5:30 p.m.	Gaseous Fuelled Vehicles	GFV
9 June 2015	9:30 a.m. - 12:30 p.m.	Environmental and Propulsion Performance Requirements of L-category vehicles	EPPR
	2:30 p.m. - 5:30 p.m.	Environmental and Propulsion Performance Requirements of L-category vehicles	EPPR
10 June 2015	9:30 a.m. - 12:30 p.m.	Worldwide harmonized Light vehicles Test Procedure	WLTP
	2:30 p.m. - 5:30 p.m.	Worldwide harmonized Light vehicles Test Procedure	WLTP
	2:30 p.m. - 5:30 p.m.	Vehicle Interior Air Quality	VIAQ

## Annex III

## List of GRPE informal working groups, task forces and subgroups

<i>Name (Acronym) (Status)</i>	<i>Chair or Co-chairs</i>	<i>Secretaries</i>	<i>End of mandate</i>
Environmental and Propulsion Performance Requirements of L-category vehicles (EPPR) (group)	Petter Åsman, petter.asman@trafikverket.se	Thomas Vercaemmen, t.vercaemmen@acem.eu	December 2020 (upon the decision of WP.29/AC.3 at their June 2015 session)
Electric Vehicles and the Environment (EVE) (group)	Michael Olechiw, Olechiw.Michael@epamail.epa.gov  Chen Chunmei (vice-Chair), chencm@miit.gov.cn  Kazuyuki Narusawa (vice-Chair), narusawa@ntsel.go.jp	Erin Marchington, Erin.Marchington@ec.gc.ca	November 2018
Gaseous Fuelled Vehicles (GFV) (group)	André Rijnders, arijnders@rdw.nl	Jeffrey Seisler, jseisler@cleanfuelsconsulting.org  Salvatore Piccolo, s.piccolo@federchimica.it	June 2016
Heavy Duty Dual-Fuel Task Force (HDDV TF) (task force)	Henk Dekker, henk.j.dekker@tno.nl	Jeffrey Seisler, jseisler@cleanfuelsconsulting.org	
Liquefied Natural Gas Task Force (LNG TF) (task force)	Paul Dijkhof, Paul.Dijkhof@kiwa.nl	Jeffrey Seisler, jseisler@cleanfuelsconsulting.org  Jaime Del Alamo, jaime.alamo@ngvaeurope.eu	
Particle Measurement Programme (PMP) (group)	Giorgio Martini, giorgio.martini@jrc.ec.europa.eu	Caroline Hosier, chosier@ford.com	June 2017
Vehicle Interior Air Quality (VIAQ) (group)	Jong Soon Lim jongsoon@ts2020.kr	Andreas Wehrmeier, andreas.wehrmeier@bmw.de	November 2017
Vehicle Propulsion System Definitions (VPSD) (group)	Christoph Albus, christoph.albus@bmvi.bund.de	Daniela Leveratto, dleveratto@oica.net	June 2015
Worldwide harmonized Light vehicles Test Procedure (WLTP) (group)	Stephan Redmann, stephan.redmann@bmvbs.bund.de  Kazuki Kobayashi (Vice-Chair), ka-koba@shinsa.ntsel.go.jp	Noriyuki Ichikawa (co-Technical Secretary), noriyuki_ichikawa@mail.toyota.co.jp  Konrad Kolesa (co-Technical Secretary), konrad.kolesa@audi.de	June 2016

## Annex IV

### Amendments to Regulation No. 101

Adopted on the basis of ECE/TRANS/WP.29/GRPE/2015/14 and GRPE-71-18 (see para. 10)

*Annex 6,*

*Paragraph 1.1.,* amend to read:

"1.1. Emissions of carbon dioxide (CO<sub>2</sub>) and fuel consumption of vehicles powered by an internal combustion engine only shall be determined according to the procedure for the Type I test as defined in Annex 4a to Regulation No. 83 **according to the series of amendments to which the vehicle is approved or in the case that the vehicle is not approved according to Regulation No. 83, the series of amendments** in force at the time of the approval of the vehicle."

*Paragraph 1.3.5.,* should be deleted:

~~"1.3.5. The widest tyre shall be chosen. If there are more than three tyre sizes, the widest minus one shall be chosen."~~

## Annex V

### Amendments to ECE/TRANS/WP.29/GRPE/2015/13

Adopted on the basis of GRPE-71-12 and GRPE-71-31 (see para. 58)

In ECE/TRANS/WP.29/GRPE/2015/13,

Part A (Explanatory report),

Paragraph 3., amend to read:

"3. It was discussed whether fuel definitions (gasoline, diesel, liquefied petroleum gas, compressed natural gas, liquefied natural gas, E10, E85, H<sub>2</sub> ...) should be included in this system of VPSD. It is proposed to **further** consider this issue in a second phase."

Paragraph 10., amend to read:

"10 It was herewith decided to define the powertrain as the part of the vehicle containing the propulsion energy storage system, the propulsion energy converter and the drivetrain, which provides directly or indirectly the mechanical energy at the wheels for the purpose of vehicle propulsion. The main reason for introducing this powertrain concept was to simplify the definitions, to avoid unnecessary hierarchical levels and to clarify what is actually meant with this expression, as it is regularly used in various existing UN Regulations and UN global technical regulations but, at the same time, perceived differently by various stakeholders and authorities. **For non-road mobile machinery, the powertrain and any of its constitutive parts referred to in the definitions may have other purposes than propulsion.**"

Paragraph 11., amend to read:

"11. Key elements of such powertrain concept are:

- (a) A vehicle shall have only one powertrain;
- (b) The propulsion energy storage systems and the propulsion energy converters are those non-peripheral main parts of the powertrain providing different forms of energy directly or indirectly for the purpose of propulsion, finally as mechanical energy at the wheels. The different powertrain vehicle definitions (Chapter 3) are classified regarding the different structures of energy storage systems and energy converters in a powertrain;
- (c) Inclusion of peripheral **devices** (e.g. electrical capacitor, 12 V battery, starter motor, intake system, fuel delivery system, electric power conditioning device, sensors, actuators, electronic control unit, exhaust after-treatment systems);
- (d) Exclusion of auxiliary **devices** (e.g. auxiliary battery, mobile air conditioning, electric window lift, hydraulic crane, heating system, etc.)."

Figure 1, title, amend to read:

"Powertrain – Basic principles"

Figure 2, title, amend to read:

"Internal Combustion Engine-Vehicle (conventional) - **ICEV**"

Figure 3, title, amend to read:

"Pure Electric Vehicle - **PEV**"

*Figure 4, title, amend to read:*

"Hybrid Electric Vehicle-Not Off Vehicle Charging (parallel) - **HEV-NOVC**"

*Figure 5, title, amend to read:*

"Hybrid Electric Vehicle-Off Vehicle Charging (serial, range extender) - **HEV-OVC**"

*Figure 6, title, amend to read:*

"Hybrid Electric Vehicle-Off Vehicle Charging (combined) - **HEV-OVC**"

*Figure 7, title, amend to read:*

"Fuel Cell Hybrid Vehicle (Not Off Vehicle Charging) - **FCHV-NOVC**"

*Paragraph 14., amend to read:*

"14. After discussion in VPSD informal working group it was decided to distinguish between energy storage systems whose output energy is used directly or indirectly for the purpose of vehicle propulsion (e.g. an Internal Combustion Engine (ICE) in a range extender Hybrid Electric Vehicle (HEV)), and other energy storage systems as parts of the powertrain (peripheral **devices**) or as parts of the remaining part of the vehicle (auxiliary **devices**). Without such a differentiation the definitions of Hybrid Vehicle (HV) and HEV are not explicit enough, and a conventional ICE vehicle could be understood as an HEV."

*Paragraph 22., amend to read:*

"22. The same approach as described in section 1.1. is needed for energy converters. Examples for "other energy converters" are a fuel pump (peripheral **device**) or a mobile air conditioning system (auxiliary **device**), which are not considered as propulsion energy converters."

*Paragraph 37., amend to read:*

"37. Peripheral devices are part of the powertrain. They can be energy storing, ~~delivering~~**converting, supplying and/or** consuming devices or other parts, systems and control units, **which are essential to the operation of the powertrain**. They are not understood as propulsion energy storage systems or propulsion energy converters of the powertrain. These devices are not providing different forms of energy directly or indirectly for the purpose of propulsion. Examples of peripheral devices are electrical capacitor, 12 V battery (~~partly~~), starter motor, intake system, fuel delivery system, electric power conditioning device, sensor, actuator, capacitor, electronic control unit, turbo charger, exhaust after-treatment system."

*Paragraph 39., amend to read:*

"39. The main energy storage systems of a powertrain where the output energy is used directly or indirectly for the purpose of vehicle propulsion, are defined as "propulsion energy storage systems" (see section 1.1.). But there are also other energy storage systems in a vehicle, as peripheral **devices** of the powertrain or auxiliary **devices**."

*Paragraph 45., amend to read:*

"45. The main energy converters of a powertrain, whose output energy is used directly or indirectly for the purpose of vehicle propulsion, are defined as "propulsion energy ~~storage systems~~**converter**" (see section 1.2.). This means for example that an ICE of a range extender HEV is understood as a propulsion energy converter of the powertrain. This clarification is important for the classification of range extender vehicles as hybrid vehicles for regulatory purposes. But there are also other energy converters in a vehicle, as peripheral **devices** of the powertrain or auxiliary **devices**."

*Subtitle 4.*, amend to read:

"4. Auxiliary **devices**"

*Paragraph 49.*, amend to read:

"49. Auxiliary **devices** are not part of the powertrain. They are energy consuming, **converting, storing** or supplying devices of the vehicle outside the powertrain, used for other purposes. Examples of auxiliary **devices** are auxiliary battery, mobile air conditioning, hydraulic crane, electric window lift or heating system. The historical approach is to measure and limit the emissions and the efficiency of a vehicle regarding its powertrain. Emissions and efficiency of auxiliary **devices** are to be treated separately."

*Subtitle 5.1.*, amend to read:

"5.1. Internal Combustion Engine Vehicle (ICEV ~~vehicle~~)"

*Subtitle 5.2.*, amend to read:

"5.2. Hybrid Vehicle (**HV**)"

*Paragraph 55.*, amend to read:

"55. It was discussed whether ICE vehicles with a stop/start system (sometimes called "micro hybrid") can be considered as EVs. If the stop/start system is designed so that the starter electric motor is only connected to the ICE for the purpose of initiating the start of the combustion process (like for conventional vehicles), and there is no direct or indirect connection of the starter electric motor for the transmission of mechanical energy to the drivetrain, such a vehicle should not be considered as an EV, because the stop/start system is a peripheral **device**, and not a propulsion energy converter. Otherwise already a conventional ICE vehicle must be considered as an EV/HEV, because the 12 V battery and the starter electric motor might have been considered as second energy storage system and energy converter. In case the starter electric motor contributes partly or continuously, directly or indirectly mechanical energy to the drivetrain, it should be considered as EV/HEV (e.g. boost function/mild hybrid)."

*Subtitle 5.4. and paragraph 60.*, to be deleted.

*Paragraphs 61. to 63.*, renumber as paragraphs 60. to 62.

*Section 6.1.*, amend to read:

"6.1. List of acronyms/abbreviations

EV	Electrified Vehicle
HEV	Hybrid Electric Vehicle
HV	Hybrid Vehicle
ICE	Internal Combustion Engine
<b>ICEV</b>	<b>Internal Combustion Engine Vehicle</b>
FC	Fuel Cell
FCV	Fuel Cell Vehicle
FCHV	Fuel Cell Hybrid Vehicle
<b>NOVC</b>	<b>Not off vehicle charging</b>
<b>OVC</b>	<b>Off vehicle charging</b>
...	"

*Part B (Vehicle powertrain definitions),**Paragraph 1., amend to read:*

- "1. "Powertrain" means the total combination in a vehicle, of propulsion energy storage system(s), propulsion energy converter(s), the drivetrain(s), ~~including peripheral devices and excluding auxiliaries,~~ providing the mechanical energy at the wheels for the purpose of vehicle propulsion, **plus peripheral devices.**"

*Paragraph 1.1.2., amend to read:*

- "1.1.2. "Rechargeable energy storage system" means a propulsion energy storage system that stores electrical or mechanical energy and which may be re-energised ~~for regenerated.~~"

*Paragraph 1.1.3., amend to read:*

- "1.1.3. "Category of propulsion energy storage system" ~~means~~ (i) a fuel storage system, or (ii) a rechargeable electric energy storage system, or (iii) a rechargeable mechanical energy storage system."

*Paragraph 1.2.1., amend to read:*

- "1.2.1. "Internal combustion engine" means a propulsion energy converter **designed to transforming** chemical energy (input) into mechanical energy (output) with an internal combustion process;"

*Paragraph 1.2.4., amend to read:*

- "1.2.4. "Category of propulsion energy converter" ~~means~~ (i) an internal combustion engine, or (ii) an electric machine, or (iii) a fuel cell."

*Paragraph 1.3., amend to read:*

- "1.3. "Drivetrain" means the connected elements of the powertrain for transmission of the mechanical energy between the propulsion energy converter(s) and ~~at~~ the wheels."

*Paragraph 1.4., amend to read:*

- "1.4. "Peripheral devices" ~~are means~~ energy consuming, **converting, storing** or supplying devices, where the energy is not primarily used for the purpose of vehicle propulsion, or other parts, systems and control units, which are **essential to the operation part** of the powertrain."

*Paragraph 4., amend to read:*

- "4. "Auxiliary devices" ~~are not part of the powertrain and are means~~ energy consuming, **converting, storing** or supplying devices **or systems** which are installed in the vehicle for **purposes** other ~~purposes~~ than the propulsion of the vehicle **and are therefore not considered to be part of the powertrain.**"

*Insert new paragraphs from 5.1.1. to 5.1.4., to read:*

- "5.1.1. "Mono-fuel vehicle" means a vehicle with an internal combustion engine that operates primarily on one type of fuel.
- 5.1.2. "Bi-fuel vehicle" means a vehicle with two separate fuel storage systems for different types of fuels and an internal combustion engine that operates primarily on one fuel at a time.

- 5.1.3. **"Dual-fuel vehicle"** means a vehicle with two separate storage systems for two different types of fuels and an internal combustion engine that operates primarily on both fuels simultaneously.
- 5.1.4. **"Flex-fuel vehicle"** means a vehicle with one fuel storage system for a mixture of fuels and an internal combustion engine that operates on a mixture or on either of those fuels."



## Annex VI

### Amendments to ECE/TRANS/WP.29/GRPE/2015/9

Adopted on the basis of GRPE-71-04-Rev.1 (see para. 62)

*In ECE/TRANS/WP.29/GRPE/2015/9,*

*Part I (Proposal),*

*Annex 4,*

*Insert a new paragraph 3., to read:*

**"3. Exclusions**

**This recommendation imposes no obligation on Contracting Parties to the 1958 Agreement to accept in their territory fuels complying with the parameters outlined in this recommendation that may have been introduced by other Contracting Parties or other countries. Compliance with applicable fuel quality legislation and standards is required in respect of fuels offered for sale in Contracting Parties."**

*Paragraphs 3. to 6.4., renumber as paragraphs 4. to 7.4.*

*Part II (Justification),*

*Insert a new item 6, to read:*

**"6. Fuels meeting these recommendations can be not accepted by Contracting Parties to the 1958 Agreement. Compliance with applicable fuel quality legislation and standards is required in respect of fuels offered for sale in Contracting Parties."**

---